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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/076,957

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Alex Margulis

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12/11/2007

MARVELL/FINNEGAN HENDERSON LLP

c/o FINNEGAN, HENDERSON, FARABOW, GARNETT et. al.

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EXAMINER

FOTAKIS, ARISTOCRATIS

ART UNIT

PAPER NUMBER

2611

MAIL DATE

DELIVERY MODE

12/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/076,957

Applicant(s)

MARGULIS ET AL.

Examiner

Aristocratis Fotakis

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/6/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4 - 5, 7 - 12, 15 - 17, 19 - 25 and 28 - 39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4 - 5, 7 - 9, 12, 15 - 17, 19 - 21, 28 - 30 and 33 - 35 is/are rejected.
- 7) ☒ Claim(s) 10 - 11, 22 - 25, 31 - 32 and 36 - 39 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4 - 5, 7 – 9, 12, 15 - 17, 19 – 21, 28 - 30 and 33 - 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Sih et al. (US PG-Pub 20030086481).

Re claims 1 and 12, Sih discloses of generating a plurality of interrupts in a transfer of symbols between fingers (#410, Fig.5 and #320, Fig.3A and 3B) of a rake receiver and a processor (#430, DSP, Fig.5) (Page 7, claims 21 – 26 of Sih), wherein the interrupts are produced by the fingers (finger counters and interrupt controller, Fig.5) of the rake receiver (interrupts from #560 to DSP, Fig.5) at a rate of generation per unit time independent of a time rate of the symbol boundaries (*when processing requests occur simultaneously*, Paragraphs 0042 – 0043 and 0047, Fig.5).

Re claims 4 and 15, Sih further discloses generating said interrupts comprises generating said interrupts with a fixed rate. (see Fig.6)

Re claims 5 and 16, Sih further discloses generating said interrupts comprises generating said interrupts, wherein said symbol boundaries comprise a constant rate (see Fig.6 and Paragraph 0043, Lines 1 - 7).

Re claims 7 and 16, Sih further discloses generating said interrupts comprises generating global symbol boundaries (processing cycle boundaries determined by interrupt controller #520 and finger counters 510A – 510N to #560 control unit/Finger parameter storage) at a rate independent of the time rate of said symbol boundaries (*when processing requests occur simultaneously*, Paragraph 0043).

Re claims 8 and 19, Sih teaches of writing from a first of said fingers (320A, Fig.3A, 3B and 5 and F1, Fig.6) to an available one of a first data register (RAM address, Fig.5, step 808, Fig.8 and Paragraphs 0037-0038, F1(A), Fig.6) and a second data register (F1(B), Fig.6); and writing from a second of said fingers (320A, Fig.3B, 3B and 5 and F2, Fig.6) to another available one of said first data register (RAM address, Fig.5, step 808, Fig.8 and Paragraphs 0037-0038, F2(A), Fig.6) and said second data register (F2(B), Fig.6); and in said global symbol boundaries, alternatively reading from said first data register and said second data register (Fig.6, Paragraphs 0037 – 0038) at

a rate independent of said first and second of said fingers (*when processing requests occur simultaneously*, Paragraphs 0042 – 0043 and 0047, Fig.5).

Re claims 9, 20 and 21, Sih teaches of further comprising at least one of incrementing a counter (finger counters, Fig.5) when writing to one of said first data register and said second data register, and decrementing a counter when reading from one of said first data register and said second data register (Paragraph 0042) (Incrementing or decrementing is an inherent feature of a counter).

Re claims 17 and 28, Sih teaches of wherein the symbol boundaries comprise a rate that changes with time (Paragraph 0043, Lines 7 – 21).

Re claims 29 and 33, Sih teaches of a method comprising: generating a plurality of interrupts in a transfer of symbols between fingers of a rake receiver and a processor, the interrupts having a rate of generation per unit time independent of the time rate of the symbol boundaries; generating global symbol boundaries at a rate independent of the time rate of the symbol boundaries (see rejection of claim 1); writing from a first finger to an available one of a first data register and a second data register; writing from a second fingers to another available one of a first data register and a second data register; and alternatively reading from the first data register and the second data

register based on the global symbol boundaries at a rate independent of the symbol boundaries of the first and second fingers (see rejection of claim 8).

Re claims 30, 34 and 35, Sih teaches of further comprising at least one of incrementing a counter (finger counters, Fig.5) when writing to one of said first data register and said second data register, and decrementing a counter when reading from one of said first data register and said second data register (Paragraph 0042) (Incrementing or decrementing is an inherent feature of a counter).

Response to Arguments

Applicant's arguments filed November 6, 2007 have been fully considered but they are not persuasive.

Applicants submit that Sih discloses of an interrupt controller that issues interrupts at a rate independent of the time rate of symbol boundaries when more than one finger issues an interrupt to the offline processing unit simultaneously but that Sih fails to disclose or teach that the finger counters, themselves, generate interrupts at a rate independent of the time rate of symbol boundaries.

Examiner submits that the finger counters with the interrupt controller together generate interrupts at a rate independent of the time rate of symbol boundaries where

the interrupt controller receives an input from the finger counters and outputs the interrupt to arbitrate between finger interrupts if more than one should occur simultaneously.

Allowable Subject Matter

Claims 10 - 11, 22 - 25, 31 - 32 and 36 - 39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristocratis Fotakis whose telephone number is (571) 270-1206. The examiner can normally be reached on Monday - Thursday 7 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh M. Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/076,957
Art Unit: 2611

Page 7

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AF


CHIEH M. FAN
SUPERVISORY PATENT EXAMINER